

AksIM-2™

off-axis absolute rotary encoder

AksIM-2™ is a non-contact high performance off-axis absolute rotary encoder designed for applications with limited installation space. The compact, low profile readhead detects and evaluates the magnetic field of a thin, axially magnetized ring.



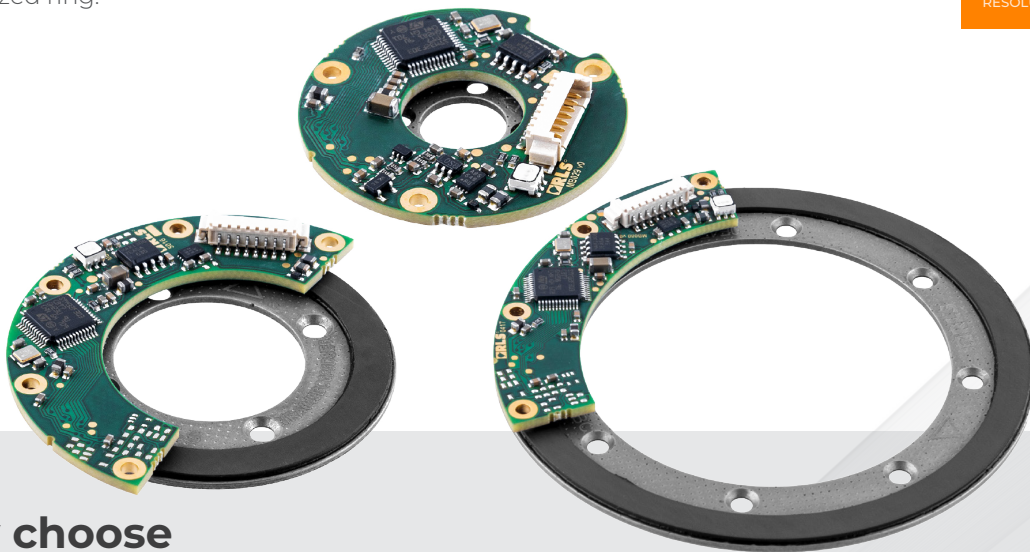
HIGH SPEED



NON-CONTACT

20

20 BITS
RESOLUTION



Why choose AksIM-2™?

FEATURES:

- ✓ True absolute
- ✓ Low profile
- ✓ Resolution to 20 bits
- ✓ Multiturn counter options
- ✓ High speed

BENEFITS:

- ✓ Improved repeatability
- ✓ Built-in self-monitoring
- ✓ Immunity to external magnetic fields
- ✓ BiSS, SSI or async serial
- ✓ Extended temperature range



ROBOTIC ARM
JOINTS



PAN/TILT
POSITIONING



PRECISE
GEAR BOX



MEDICAL



MOTOR CONTROL

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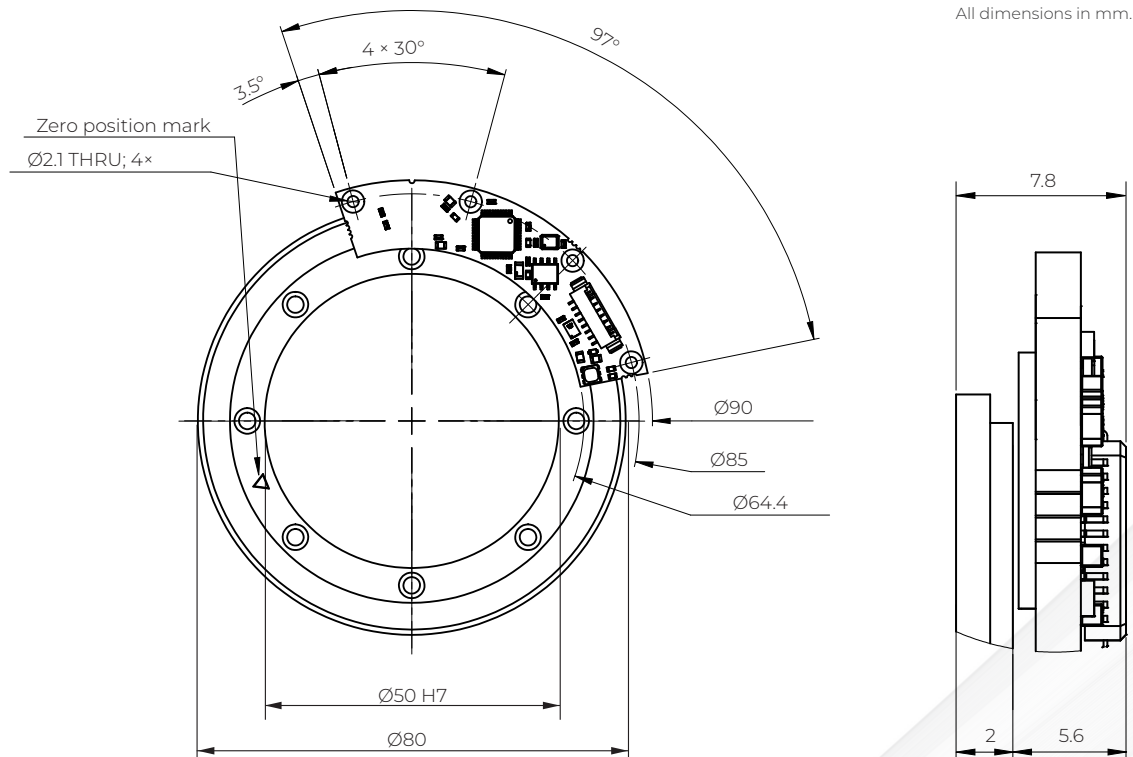
A RENISHAW  **associate company**

AksIM-2™ technical specifications

SYSTEM DATA		
Reading type	Axial reading	
Resolution	From 17 bit to 20 bit and 16 bit multiturn counter option	
Maximum speed	10,000 RPM	
Encoder accuracy	±0.05° / 180 arcsec (before installation - errors caused by mounting inaccuracy of the read-head, ring and drive shaft are not included)	
Final system accuracy	Typ. ±0.025° / 90 arcsec (after encoder self-calibration). For accuracy up to ±0.005° / 18 arcsec contact RLS.	
ELECTRICAL DATA		
Supply voltage	4.5 V to 5.5 V at the connector. Rise time should be shorter than 20 ms.	
Current consumption	Typ. 130 mA, max. 150 mA (without load on the outputs)	
Set-up time	100 ms (first data ready after supply voltage is in range), worst case: 200 ms	
MECHANICAL DATA		
Available ring sizes (outer diameter)	29 mm, 39 mm, 49 mm, 53 mm, 64 mm, 80 mm	
Ring material type	2 mm thick rings	EN 1.4016 / AISI430 with glued CPE rubber filled with ferrite particles
	3.9 mm and 4.9 mm thick rings	EN 1.4005 / AISI416 or EN 1.4104 / AISI430F with glued CPE rubber filled with ferrite particles
ENVIRONMENTAL DATA		
Operating and storage temperature	-40 °C to +105 °C (standard) -30 °C to +85 °C (obsolete, available only on request)	

AksIM-2™ dimensions

MB080 readhead with MRA080 ring



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